

FIRE MANAGEMENT PLAN

FOR

Two Ponds National Wildlife Refuge

Arvada, Colorado

Prepared by: _____ Date _____
Wildland Fire Planner

Recommended by: _____ Date _____
Project Leader
Rocky Mountain Arsenal National Wildlife Refuge

Concurred by: _____ Date _____
Regional Fire Management Coordinator,
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Concurred by: _____ Date _____
Refuge Supervisor,
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Concurred by: _____ Date _____
Regional Chief, National Wildlife Refuge System
Mountain-Prairie Region

Approved by: _____ Date _____
Regional Director,
Mountain-Prairie Region

FIRE MANAGEMENT PLAN

1.0 INTRODUCTION

1.1 General

U.S. Fish and Wildlife Service policy requires that an approved Fire Management Plan must be in place for all Service lands with burnable vegetation. This plan meets that requirement.

1.2 Description of Unit

Two Ponds National Wildlife Refuge is situated in the heart of an urban area. Located within the City of Arvada, a suburb of Denver, Colorado, the Refuge is an oasis in residential area and commercial development.

The 72.2 acre Refuge consists mostly of grasslands. There are three small ponds and several small woodlots and woody riparian corridors along waterways. The Refuge is bisected by three privately owned and operated irrigation canals. The west half of the Refuge is open to public use daily and is regularly used by visitors using an established trail system.

The Refuge was established under the authority of the Emergency Wetland Resource Act of 1986, and the purpose is, “to promote in concert with other Federal and State Statutes and programs, the conservation of wetlands of the nation in order to maintain the public benefits they provide and help fulfill international obligations contained in various migratory bird treaties and conventions....”

The Mission is: “To protect and enhance urban wildlife habitat and provide opportunities for environmental education”. Specific purposes are:

- ☐ To restore, enhance and preserve a diversity of upland and wetland habitats of migrant and resident wildlife, fish and invertebrates,
- ☐ To provide opportunities for environmental education with emphasis on the inherent values of wetlands and wildlife in an urban environment; and
- ☐ To provide interpretive facilities and opportunities related to wildlife such as viewing, study and photography.

To date, development is limited to three wooden kiosks, a small wooden shed, trail markers, and privacy fence. There are no known state and federally listed threatened and endangered species or significant cultural resources.

1.3 Area Fire History

The Refuge is completely surrounded by streets and commercial and residential development. There have been no reported wildland fires since the Refuge was established in 1992. The Refuge is in an area that has experienced wildfires started primarily by human activity. There are many potential sources for human-caused fires and moderate potential for wildland fire on the Refuge, especially in early spring before green-up and during periods of drought in late summer and fall.

1.4 Fuels

The primary threat from wildfire would involve grass fuel models. Fire behavior models developed by the Northern Forest Fire Lab (NFFL) in Missoula, Montana that can be used to describe the expected fire behavior include:

- ☐ **NFFL Fuel Model 1 - Short Grass** - describes areas dominated by short grass, such as those found in a mix-grass prairie. Rate of spread of 78 chains/hour (a little over a foot a minute) with flame lengths of 4 feet are possible under moderate conditions.
- ☐ **NFFL Fuel Model 3 - Tall Grass** - describes areas dominated by grass or grasslike vegetation averaging 3 feet in height. This would include cured stands of cattail. Rate of spread of 104 chains/hour (over 1.5 feet per minute) with flame lengths of 12 feet are possible under moderate conditions. This fuel model occurs around developed wetlands and some naturally occurring wetlands.

2.0 POLICY COMPLIANCE - GOALS AND OBJECTIVES

2.1 Compliance with Service Policy

U.S. Fish and Wildlife Service policy requires that an approved Fire Management Plan must be in place for all Service lands with burnable vegetation. Service Fire Management Plans must be consistent with firefighter and public safety, protection values, and land, natural, and cultural resource management plans, and must address public health issues. Fire Management Plans must also address all potential wildland fire occurrences and may include the full range of appropriate management responses. The Regional Director must coordinate, review, and approve Fire Management Plans to ensure consistency with approved land management plans.

Service policy allows for a wildland fire management program that offers a full range of activities and functions necessary for planning, preparing for wildfires, emergency suppression operations, and emergency rehabilitation.

2.2 NEPA Compliance Statement

This plan meets the requirements established by the National Environmental Protection Act (NEPA). Wildfire suppression is categorically excluded, as outlined in 516 DM2 Appendix 1.

Copies of this plan will be circulated to cooperators and other interested parties.

3.0. UNIT FIRE MANAGEMENT GOALS

The goal of wildland fire management is to plan and make decisions that help accomplish the mission of the Fish and Wildlife Service. Fire management objectives (standards) are used in the planning process to guide management to determine what fire management responses and activities are necessary to achieve land management goals and objectives.

The primary goal is to provide for firefighter and public safety, protect public and private property, and natural and cultural resource values. Under guidance provided by Service and Departmental policy and other directives, all wildland fires will be suppressed using the appropriate management response concept.

4.0 FIRE MANAGEMENT STRATEGIES

4.1 General

The Service depends on the Arvada Fire Protection District (District) for wildland and structural fire protection. This service will be provided under a MOU (Appendix B). Under the agreement, the District will provide all necessary equipment and personnel, and will assign an Incident Commander (IC) to every Refuge fire.

The basic fire management strategy for the Refuge will be to use the appropriate management response concept to suppress all wildfires commensurate with values at risk. Strategies employing a range of suppression options may be considered by the Incident Commander. The primary suppression strategy employed will be direct attack. However, there may be occasions when direct attack on a high intensity, rapidly spreading wildland fire would jeopardize firefighter safety and not be appropriate. In these cases indirect attack will be employed utilizing natural and human-made features as wildfire control points. Minimum impact suppression techniques (MIST) will be utilized, where appropriate.

All fire management activities will be conducted in a manner consistent with applicable laws, policies, and regulations.

4.2 Limits

- ☐ All fires occurring on the Refuge will be staffed or monitored until declared out.
- ☐ Heavy equipment (dozers, discs, plows, and graders) will not be used for fire suppression except in life threatening situations without the express approval of the Project Leader or his/her designee.
- ☐ Aerial Retardants and foams will not be used within 300 feet of any waterway as described in the Guidelines for Aerial Delivery of Retardant or Foam near Waterways (Appendix C).

4.3 Impacts of Fire Management Program

Other than a wildfire originating on the Refuge leaving Service lands, there is little reason to believe that fire management actions would adversely impact neighbors. In fact, providing for the suppression of wildland fires through the local fire authority will reduce the possibility that a wildfire resulting from arson, a carelessly discarded cigarette, or youth playing with fire would leave the Refuge and threaten neighboring residences.

5.0 FIRE MANAGEMENT RESPONSIBILITIES

5.1 Refuge Staff Responsibilities

5.1.1 Project Leader

The Project Leader is responsible for planning and implementation of an effective and safest possible fire management program at the Refuge.

- ☐ Responsible for the overall management of the Refuge including fire management.
- ☐ Ensures fire management policies observed.
- ☐ Ensures that adequate wildland fire protection and fire management capabilities are in place to meet the Refuge's needs.
- ☐ Fosters effective cooperative relations with cooperating fire organizations and adjoining land owners.
- ☐ Maintains the facility in a condition that minimizes the threat of wildfire to Service facilities and other improvements.

5.1.2 Administrative Officer

- ☐ Completes all necessary administrative documents associated with fire management activities.

5.1.3 Zone or District Fire Management Officer (FMO)

- ☐ Provides technical expertise on fire management issues as requested by the Project Leader.
- ☐ Submits completed DI-1202 (wildfire report) and completes a listing of any other fire related expenditures or losses to the Regional Fire Management Coordinator within 10 days of fire being declared out.
- ☐ Ensures that the fire site is stabilized and notifies management if rehabilitation is required.
- ☐ Assists the Project Leader complete the WFSA (Wildland Fire Situation Analysis).
- ☐ Assists the Project Leader complete the Delegation of Authority, if needed.

5.2 Cooperator Involvement

The District will provide suppression coverage and other tasks as specified in their agreement with the Service (Appendix B).

The Service has adopted the Wildland and Prescribed Fire Qualification Subsystem Guide, PMS 310-1, to identify minimum qualification standards for interagency wildland and prescribed fire operations. Under that authority, local wildland fire suppression forces will meet the standards established for their agency or department.

The MOU may specify conditions under which abandonment of a Refuge fire might occur in order to allow response of committed resources to higher priority incidents.

5.3 Wildfire Incident Commander (as assigned)

- ☐ The Incident Commander (IC) is responsible for the safe and efficient suppression of the assigned wildfire.
- ☐ Notifies his/her Dispatcher of all resource needs and situational updates, including the need for extended attack.
- ☐ Ensures wildfire behavior is monitored and all firefighters are informed of forecasted and expected fire weather and behavior. Informs fire suppression personnel of escape routes and safety zones, and posts lookouts.
- ☐ Ensures personnel are qualified for the job they are performing.
- ☐ Identifies and protects endangered and threatened species and sensitive areas according to the Fire Management Plan.
- ☐ Utilizes minimum impact tactics to the fullest extent possible.
- ☐ Ensures fire is staffed or monitored until declared out.

6.0 PREPAREDNESS

Refuge staff will perform the following annual fire management activities.

Table 1: Annual Refuge Fire Management Activities

[illegible]

ACTIVITY	1	2	3	4	5	6	7	8	9	10	11	12
Update Interagency Fire Agreements/Annual Operating Plans	x											
Review and Update Fire Management Plan	x											

Activities should be completed prior to the end of the month that is indicated.

As indicated above, the Refuge will rely on the Arvada Fire Protection District to provide wildland fire suppression services. Refuge personnel are not expected to be trained or equipped to perform that function. However, on a case-by-case basis, interested employees may, with the concurrence of the Project Leader and the Zone Fire Management Officer, receive wildland fire training to allow them to participate in interagency fire management efforts. Those individuals must meet Service annual fitness and training requirements.

7.0 WILDFIRE PROGRAM

7.1 Special Safety Concerns and Firefighter Safety

Safety of Service employees and cooperators involved in fire management activities is of primary concern. Only trained and qualified employees will be assigned to fire management duties. No Service employee, contractor or cooperator will be purposely exposed to life threatening conditions or situations except when necessary to save the life of another person.

Smoke from wildfires is a recognized health concern for firefighters. Incident commanders must plan to minimize exposure to heavy smoke by incorporating the recommendations outlined in the publication Health Hazards of Smoke (Sharkey 1997).

Structural firefighting is not the functional responsibility of the Service (241 FW 7.1 and 095 FW 3.8.C.). Structural and vehicle firefighting is the responsibility of State and local fire jurisdictions. Service personnel may assist in structural fire suppression by directing traffic, providing structure protection, etc. Cooperative agreements with local structural fire departments should be pursued for the protection of Service owned structures. However, cooperative agreements will not commit Service personnel to structural fire suppression.

7.2 Prevention Program

The Refuge will maintain the grounds near buildings and other structures to reduce the possibility of a wildfire spreading from Service facilities or threatening improvements on Service lands. During periods of high fire danger, smoking and open fires may be restricted or banned in accordance with Service policy.

The Refuge may request funding under the Wildland Urban Interface Initiative to reduce hazard fuel loading on site. If a project is funded, a schedule will be established to maintain the site in out years.

7.3 Detection

In all likelihood, wildland fires will be reported to the local fire authority through the 911 system and the Fire Protection District will respond without notifying Refuge personnel.

There may be occasions when unqualified Service personnel discover a wildland fire. When this occurs, the employee should report the fire and request assistance before taking action to suppress or slow the spread of the fire. If the fire poses an imminent threat to human life, the employee may take appropriate action to protect that life before requesting assistance. The unqualified personnel will be relieved from direct on-line suppression duty or reassigned to non-fireline duty when qualified initial attack forces arrive.

7.4 Initial Reporting

Wildland fires are to be reported to the Arvada Fire Protection District by dialing 911.

7.5 Fire Suppression

All suppression efforts will be directed towards safeguarding life and property while protecting the Refuge's resources and other values at risk from harm.

Service policy requires firefighters suppressing wildland fires on Service lands meet standards and qualifications established in 310-1. The District, who will be suppressing wildland fires in accordance with their agreement with the Service, meets this requirement. The District also meets the policy directive that suppression forces use the Incident Command System.

The Incident Commander (IC) will receive general suppression strategy from the Fire Management Plan, but appropriate tactics used to suppress the fire will be up to the IC to implement. Minimum impact suppression tactics should be used whenever possible.

The use of earth moving equipment for suppression activities (dozers, graders, plows) on the Refuge will not be permitted without the approval of the Project Leader or his/her designee.

7.6 Escaped Fires/Extended Attack

The IC will notify his/her Dispatcher and the Project Leader whenever it appears a wildfire will escape initial attack efforts, escape Service lands, or when fire complexity will exceed the capabilities of command or operational forces. Additional resources will be ordered in accordance with local interagency agreements.

The Project Leader will notify the Zone Fire Management Officer who will provide assistance, as available, with the implementation of the extended attack operations including:

- ☐ Assisting the Project Leader complete the WFSA (Wildland Fire Situation Analysis).
- ☐ Assisting the Project Leader complete the Delegation of Authority, if needed.

7.7 Mop up Standards and Emergency Stabilization and Rehabilitation

The IC will be responsible for mop-up and mitigating suppression impacts incurred on Refuge fires. The mop-up standards established in the Fireline Handbook will be followed. Refuge fires will be patrolled or monitored until declared out.

Prior to releasing all firefighters from a wildland fire the following actions will be taken:

- ☐ All trash will be removed.
- ☐ Firelines will be refilled and waterbars added if needed.
- ☐ Hazardous trees and snags cut and the stumps cut flush.
- ☐ Overturned sod resulting from plowing must be rolled back with a grader or by hand and compacted to preserve native grass root stock.

Other emergency stabilization and emergency rehabilitation measures may be taken in accordance with Chapter 5 of the Fire Management Handbook. Briefly:

- ☐ **Emergency stabilization** is the use of appropriate emergency stabilization techniques in order to protect public safety and stabilize and prevent further degradation of cultural and natural resources in the perimeter of the burned area and downstream impact areas from erosion and invasion of undesirable species. The Incident Commander may initiate Emergency Stabilization actions before the fire is demobilized, as delegated by the Agency Administrator, but emergency stabilization activities may be completed after the fire is declared out.
- ☐ **Rehabilitation** is the use of appropriate rehabilitation techniques to improve natural resources as stipulated in approved Unit management plans and the repair or replacement of minor facilities damaged by the fire. Total "rehabilitation" of a burned area is not within the scope of the Emergency Rehabilitation funding. Emergency Rehabilitation funding can be used to begin the rehabilitation process if other funding is committed to continue the rehabilitation throughout the life of the project (beyond the initial 3 years of Emergency Rehabilitation funding). Major facilities are repaired or replaced through supplemental appropriations from other funding sources.
- ☐ Because of the emergency nature of the fire event, the emergency stabilization section of the Emergency Stabilization and Rehabilitation Plan (ESR Plan) must be developed expeditiously and is frequently developed by a local unit or designated burned area ESR team. The rehabilitation section of the ESR Plan is not considered an emergency, and is developed as other Unit land use plans. The Project Leader is responsible for preparing all ESR Plans. In order to be funded, ESR Plans must meet resource management objectives and be approved by the Project Leader and Regional Director.

8.0 ADDITIONAL OPERATIONAL ELEMENTS

8.1 Public Safety

Firefighter and public safety will always take precedence over property and resource protection during any fire management activity. Firefighter safety was covered previously. This section will deal with public safety.

Fire fronts on open lands, especially under windy conditions, move rapidly and are

dangerous. However, the Refuge is small; therefore, entrapment by public users is not considered to be a threat. The local law enforcement agency having jurisdiction will maintain order at the scene and enforce evacuation orders. Service personnel may assist with the evacuation process in cooperation with the law enforcement officer in charge.

Smoke from a wildland fire could impair visibility on roads and become a hazard. During wildfires, the local law enforcement agency having jurisdiction is responsible for managing traffic hazards from smoke.

Wildfires which might escape Service lands and spread to inhabited private property are also a concern. The IC is responsible for informing the appropriate law enforcement agency and requesting the evacuation of the public from potentially dangerous situations.

8.2 Fire Management Plan Review

The Fire Management Plan will be reviewed annually to ensure the fire program advances and evolves with the Service's and the Refuge's mission.

8.3 Wildfire Review

The Regional Fire Management Coordinator and/or Zone FMO will conduct formal critiques in the event of:

- ☐ Significant injury, accident, or fatality.
- ☐ Significant property or resource damage.
- ☐ Significant safety concerns are raised.
- ☐ An extended attack is necessary.

9.0 CULTURAL RESOURCES

Fire Management activities at the Refuge will be implemented in accordance with the regulations and directions governing the protection of cultural resources as outline in Departmental Manual Part 519, Code of Federal Regulations (36 CFR 800), the Archeological Resources Protection Act of 1979, as amended, and the Archeological and Historic Preservation Act of 1974. All fire management activities will be in compliance with Section 106 of the National Historic Preservation Act of 1966, as amended.

No cultural resource surveys have been conducted at Two Ponds. The Farmer's Highline Canal (SJF 1053.1) is on the Refuge. Impacts to unidentified cultural resources may occur during suppression activities. The following actions will be taken to protect archeological and cultural resources:

- ☐ Low impact wildfire suppression tactics (cold-trailing, use of foam/wet-water/water, use of natural and manmade barriers, change in vegetation, mowing, etc.) will be used to the fullest extent possible.
- ☐ The use of mechanized equipment on Service lands must be approved by the Project Leader or his/her designee. When the use of heavy equipment is authorized, its use will be monitored by Service personnel.

- ☐ The location of sites discovered as the result of fire management activities will be reported by the Project Leader to the Regional Archeologist.
- ☐ Rehabilitation plans will address cultural resources and will be reviewed by the Regional Archeologist.

10.0 Bibliography

Anderson, Hal E. 1982. Aids to Determining Fuel Models For Estimating Fire Behavior, General Technical Report INT-122. USDA Forest Service. Intermountain Forest and Range Experiment Station. Ogden, Utah. 22pp.

Jamiel, David 2001. Wildland Fire Management Plan Questionnaire - Two Ponds National Wildlife Refuge. Rocky Mountain Arsenal National Wildlife Refuge, Commerce City, Colorado.

Sharkey, Brian ed. 1997. Health hazards of smoke: recommendations of the April 1997 Consensus Conference. Tech. Rep 9751-2836-MTDC. USDA Forest Service. Missoula Technology and Development Center. Missoula, Montana. p 4-5.

United States Fish and Wildlife Service 2000. United States Fish and Wildlife Service Wildland Fire Management Handbook (December 2, 2000). Boise, Idaho.

Appendix A: Definitions

Agency Administrator: The appropriate level manager having organizational responsibility for management of an administrative unit. May include Director, State Director, District Manager or Field Manager (BLM); Director, Regional Director, Complex Manager or Project Leader (FWS); Director, Regional Director, Park Superintendent, or Unit Manager (NPS), or Director, Office of Trust Responsibility, Area Director, or Superintendent (BIA).

Appropriate Management Action: Specific actions taken to implement a management strategy.

Appropriate Management Response: Specific actions taken in response to a wildland fire to implement protection and fire use objectives.

Appropriate Management Strategy: A plan or direction selected by an agency administrator which guide wildland fire management actions intended to meet protection and fire use objectives.

Appropriate Suppression Response: Selecting and implementing a prudent suppression option to avoid unacceptable impacts and provide for cost-effective action.

Emergency Fire Rehabilitation/Burned Area Emergency Rehabilitation (EFR/BAER): Emergency actions taken during or after wildland fire to stabilize and prevent unacceptable resource degradation or to minimize threats to life or property resulting from the fire. The scope of EFR/BAER projects are unplanned and unpredictable requiring funding on short notice.

Extended attack: A fire on which initial attack forces are reinforced by additional forces.

Fire Suppression Activity Damage: The damage to lands, resources and facilities directly attributable to the fire suppression effort or activities, including: dozer lines, camps and staging areas, facilities (fences, buildings, bridges, etc.), handlines, and roads.

Fire effects: Any consequences to the vegetation or the environment resulting from fire, whether neutral, detrimental, or beneficial.

Fire management: All activities related to the prudent management of people and equipment to prevent or suppress wildland fire and to use fire under prescribed conditions to achieve land and resource management objectives.

Fire Management Plan: A strategic plan that defines a program to manage wildland and prescribed fires and documents the Fire Management Program in the approved land use plan. The plan is supplemented by operational procedures such as preparedness plans, preplanned dispatch plans, prescribed fire plans and prevention plans.

Fuels: Materials that are burned in a fire; primarily grass, surface litter, duff, logs, stumps, brush, foliage, and live trees.

Fuel loadings: Amount of burnable fuel on a site, usually given as tons/acre.

Hazard fuels: Those vegetative fuels which, when ignited, threaten public safety, structures and facilities, cultural resources, natural resources, natural processes, or to permit the spread of wildland fires across administrative boundaries except as authorized by agreement.

Initial Attack: An aggressive suppression action consistent with firefighter and public safety and values to be protected.

Maintenance burn: A fire set by agency personnel to remove debris; i.e., leaves from drainage ditches or cuttings from tree pruning. Such a fire does not have a resource management objective.

NFDRS Fuel Model: One of 20 mathematical models used by the National Fire Danger Rating System to predict fire danger. The models were developed by the US Forest Service and are general in nature rather than site specific.

NFFL Fuel Model: One of 13 mathematical models used to predict fire behavior within the conditions of their validity. The models were developed by US Forest Service personnel at the Northern Forest Fire Laboratory, Missoula, Montana.

Preparedness: Actions taken seasonally in preparation to suppress wildland fires, consisting of hiring and training personnel, making ready vehicles, equipment, and facilities, acquiring supplies, and updating agreements and contracts.

Prevention: Activities directed at reducing the number or the intensity of fires that occur, primarily by reducing the risk of human-caused fires.

Rehabilitation: (1) Actions to limit the adverse effects of suppression on soils, watershed, or other values, or (2) actions to mitigate adverse effects of a wildland fire on the vegetation-soil complex, watershed, and other damages.

Suppression: A management action intended to protect identified values from a fire, extinguish a fire, or alter a fire's direction of spread.

Wildfire: An unwanted wildland fire.

Wildland Fire: Any non-structure fire, other than prescribed fire, that occurs in the wildland.

Wildland Fire Situation Analysis (WFSA): A decision-making process that evaluates alternative management strategies against selected safety, environmental, social, economical, political, and resource management objectives as selection criteria.

Wildland/urban interface fire: A wildland fire that threatens or involves structures.

APPENDIX B: COOPERATIVE AGREEMENT

RESERVED

APPENDIX C: GUIDELINES FOR AERIAL DELIVERY OF RETARDANTS

Guidelines for Aerial Delivery of Retardant or Foam near Waterways

Definition:

WATERWAY – Any body of water including lakes, rivers, streams and ponds whether or not they contain aquatic life.

Guidelines:

Avoid aerial application of retardant or foam within 300 feet of waterways.

These guidelines do not require the helicopter or airtanker pilot-in-command to fly in such a way as to endanger his or her aircraft, other aircraft, or structures or compromise ground personnel safety.

Guidance for pilots:

To meet the 300-foot buffer zone guideline, implement the following:

- ☐ Medium/Heavy Airtankers: When approaching a waterway visible to the pilot, the pilot shall terminate the application of retardant approximately 300 feet before reaching the waterway. When flying over a waterway, pilots shall wait one second after crossing the far bank or shore of a waterway before applying retardant. Pilots shall make adjustments for airspeed and ambient conditions such as wind to avoid the application of retardant within the 300-foot buffer zone.
- ☐ Single Engine Airtankers: When approaching a waterway visible to the pilot, the pilot shall terminate application of retardant or foam approximately 300 feet before reaching the waterway. When flying over a waterway, the pilot shall not begin application of foam or retardant until 300 feet after crossing the far bank or shore. The pilot shall make adjustments for airspeed and ambient conditions such as wind to avoid the application of retardant within the 300-foot buffer zone.
- ☐ Helicopters: When approaching a waterway visible to the pilot, the pilot shall terminate the application of retardant or foams 300 feet before reaching the waterway. When flying over a waterway, pilots shall wait five seconds after crossing the far bank or shore before applying the retardant or foam. Pilots shall make adjustments for airspeed and ambient conditions such as wind to avoid the application of retardant or foam within the 300-foot buffer zone.

Exceptions:

- ☐ When alternative line construction tactics are not available due to terrain constraints, congested area, life and property concerns or lack of ground personnel, it is acceptable to anchor the foam or retardant application to the waterway. When anchoring a retardant or foam line to a waterway, use the most accurate method of delivery in order to minimize placement of retardant or foam in the waterway (e.g., a helicopter rather than a heavy airtanker).
- ☐ Deviations from these guidelines are acceptable when life or property is threatened and the use of retardant or foam can be reasonably expected to alleviate the threat.
- ☐ When potential damage to natural resources outweighs possible loss of aquatic life, the unit administrator may approve a deviation from these guidelines.

Threatened and Endangered (T&E) Species:

The following provisions are guidance for complying with the emergency Section 7 consultation procedures of the Endangered Species Act (ESA) with respect to aquatic species. These provisions do not alter or diminish an action agency's responsibilities under the ESA.

Where the T&E species or their habitats are potentially affected by aerial application of retardant or foam, the following additional procedures apply:

1. As soon as practicable after the aerial application of retardant or foam near waterways, determine whether the aerial application has caused any adverse effects to a T&E species or their habitat. This can be accomplished by the following:
 - a. Aerial application of retardant or foam outside 300 feet of a waterway is presumed to avoid adverse effects to aquatic species and no further consultation for aquatic species is necessary.
 - b. Aerial application of retardant or foam within 300 feet of a waterway requires that the unit administrator determine whether there have been any adverse effects to T&E species within the waterway.

These procedures shall be documented in the initial or subsequent fire reports.

2. If there were no adverse effects to aquatic T&E species or their habitats, there is no additional requirement to consult on aquatic species with Fish and Wildlife Service (FWS) or National Marine Fisheries Service (NMFS).
3. If the action agency determines that there were adverse effects on T&E species or their habitats then the action agency must consult with FWS and NMFS, as required by 50 CFR 402.05 (Emergencies). Procedures for emergency consultation are described in the Interagency Consultation Handbook, Chapter 8 (March 1998). In the case of a long duration incident, emergency consultation should be initiated as soon as practical during the event. Otherwise, post-event consultation is appropriate. The initiation of the consultation is the responsibility of the unit administrator.

Each agency will be responsible for insuring that the appropriate guidelines and training manuals reflect there guidelines.

RW FIRE
MAIL STOP 60130

Memorandum

To: Project Leader, Rocky Mountain Arsenal National Wildlife Refuge

From: Regional Fire Management Specialist, Mountain-Prairie Region

Subject: Revised Fire Management Plan

Attached is the approved Fire Management Plan for Two Ponds National Wildlife Refuge and a floppy disk containing an electronic file of the revised Fire Management Plan.

The final wording for Section 9: Cultural resources was developed in consultation with the Regional Archeologist, and the statement regarding the use of heavy equipment in any grassland area vegetated primarily with cool-season exotics was not included out of concern for providing additional soils for further impact.

We are available to assist you with the development of an agreement with the Arvada Fire Protection District. Please contact Angie Braun of this office at 303-236-8145, extension 617.

Over time conditions will change at the Refuge. The plan should be reviewed annually to insure it is current. If large scale changes need to be made, the plan should be rewritten and submitted for review and approval in accordance with existing policy.

If you have any questions or comments, please contact me at 303-236-8145, extension 618 or Phil Street at 303-236-8145, extension 676.

Attachment

bcc:RO, Rwrif, RW file, Phil Street,
RW:CDouhan